

RUNNING HEAD: Effects of Music on Study Habits

The Effects of Music on College Students' Study Habits and Test Scores

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Everyone has something to say about music. “You are the music while the music lasts,” said American-born poet T.S. Eliot. “Music expresses that which cannot be said and on which it is impossible to be silent,” said French romanticist Victor Hugo. “Music is an outburst of the soul,” said English composer Frederick Delius. “When words leave off, music begins,” said German poet Heinrich Heine. “Music is the shorthand of emotion,” said Russian writer Leo Tolstoy. These men were from very different backgrounds and each hailed from a different country. However, they all shared similar views on music. American poet and educator Henry Wadsworth Longfellow said it best: “Music is the universal language of mankind.”

There is no doubt that music is a powerful player in human emotion. The very heart of music itself is rooted there, as evident in the aforementioned quotes. A song can tug at any given emotion, depending on the lyrics, the chord structure, the melody, and the listener. Also, purely listening to music can be enjoyable, relaxing, or stimulating. From the other side, singing and playing music can be an intense release of emotion. Music often acts as a key that unlocks human emotion whether one is listening to or making music.

Beyond emotional health, music has been proven to have physical and mental health benefits as well. From heart disease to Alzheimer’s disease to autism and attention deficit hyperactivity disorder, the physical benefits of listening to music are continuously being discovered. The field of music therapy is devoted entirely to studying the effects of music on patients.

There have also been several studies done regarding the effects of music on the brain and cognitive learning abilities. Music has been linked to increased brain function and activity. The

Mozart Effect studies showed listening to classical music – specifically Mozart – to improve IQ scores (Rauscher, Shaw & Ky, 1993).

Partly because of the profundity of the results and partly because of the heavy media coverage the Mozart Effect research received, other researchers expanded on this experiment and began to explore the other possible benefits of music. They tested its effects on elementary students, preschool students, junior high students, high school students, college students, and adults alike. They used several different formats for their research and experiments, and came up with several different results. As with any subject, there were skeptics and supporters, adamant that their views were correct and any dissenting views were incorrect.

Humans are always looking for ways to better themselves, to better their bodies and performance; look no further than the million-dollar industries of diet, weight loss and performance enhancement supplements. Likewise, humans are also always seeking ways to enhance their mental performance as well. As with any idea regarding possible human benefits, several studies have been done in an attempt to prove or disprove any and every angle. It is no different with the idea that music can improve the quality of human lives. The notion that something as simple as music can improve test scores, quicken healing or even increase intelligence has kept researchers busy for years.

This particular notion has also intrigued me for years. I grew up in a musical family and have danced and sung my entire life. I've always enjoyed listening to music, dancing to music and making music. I read the research showing positive effects of music on tests scores and even IQ scores. I tried listening to the radio while I studied but realized that unless I had the volume down very low it distracted me. I experimented with several different genres of music and

discovered that Mozart did have a positive effect on my focus. Classical music seemed to improve my focus as I studied. My curiosity peaked, and I wondered if other students used music as a tool to study more effectively. This led me to conduct the following research.

Literature Review

Before conducting research of my own, I found it necessary to see what research has already been conducted. As mentioned before, there is an abundance of research regarding music and its effects on humans. Several sides of the topic have been explored and argued, and experiments using many different variable groups have been completed. After reviewing the available literature – of which there was a plethora – the following categories should be discussed: The Mozart Effect; Music and Listening; Cognition and Private Musical Training; Physical Effects of Music; and Music and Studying.

The Mozart Effect

In 1993, Rauscher, Shaw and Ky made a groundbreaking discovery. Their experiment involved 36 undergraduate students who, in three different sessions, listened to ten minutes of silence, ten minutes of a relaxation tape, and ten minutes of Mozart's Sonata for Two Pianos in D Major, K. 448. After each listening session, they were given the Stanford-Binet Intelligence test. The students scored on average eight to nine points higher after listening to Mozart than after listening to the relaxation tape. Rauscher, Shaw and Ky (1993) hypothesized that hearing the right kind of music might stimulate neurons in the brain before completing a spatial task, causing greater efficiency (Rauscher, Shaw, & Ky, 1993). Though the Mozart Effect was short-term – it only lasted ten to fifteen minutes – it was praised when it was first published. Georgia

Governor Zell Miller even budgeted \$105,000 to provide a CD of classical music to every baby born in Georgia (Mozart for Georgia Newborns, 1998).

Conversely, the Mozart Effect has also encountered plenty of academic skepticism. The media ran with it in the early 1990s, and presumptuously applied research done on undergraduate students to infants and children, leading Georgia's governor to do what he did (Bowman, Punyanunt-Carter, Cheah, Watson, & Rubin, 2007). Skepticism led Schellenberg (2004; 2005; 2006) among several other researchers to do replication studies of the original study done by Rauscher, Shaw and Ky (1993). These studies showed mixed results.

The main argument against the Mozart Effect is that it is not the music that enhances intelligence; it is the enjoyment and arousal the music instigates that enhances brain function (Chabris, 1999). This arousal takes place because the aforementioned Mozart sonata is allegro, or quicker-paced, and it is also in a major key, which evokes happier emotions than a minor key counterpart (Schellenberg, Music and Cognitive Abilities, 2005). In fact, Schellenberg (2005) goes so far as to say that Mozart's music does not have any special effect; rather, any up-tempo, catchy tune that is listener-appropriate can increase arousal level and mood, at least short-term. However, even the skeptics have found in their studies that while listening to Mozart does not increase general intelligence levels, it does seem to increase spatial-temporal reasoning and the ability to transform visual images (Chabris, 1999). The Mozart Effect has been refuted by some to be simply the arousal or stimulation effect that music has on the brain and cognitive function.

Music and Listening

Listening to music might also affect listening ability and comprehension. Tomatis, who was a French physician, psychologist, and ear specialist, used audio stimulation to aid listening

problems. Tomatis preferred high frequency sounds, equating them to a mother's voice in the womb. Most of Mozart's work is abundant with high frequency sound, as opposed to other classical composers whose music might be too relaxing or too stimulating (Palmer, Sharp, Carter, & Roddenberry, 1991). Pearsall (1989) conducted a distraction study contrasting listening comprehension abilities of subjects who listened to tonal music, atonal music, or silence while completing a listening comprehension test. The results showed those who listened to the atonal music scored lower than those who listened to the tonal music, and those who listened to tonal music scored lower than those who listened to silence during the test. In another listening experiment, two groups of fifth and sixth grade students listened to Mozart or Bach and a control group listened to normal background noise while completing paper folding and cutting activities at school. Both the Mozart and the Bach groups had higher scores than the control group. Further, the Mozart group had higher scores than the Bach group. This study was different because the treatment was given during the test as opposed to prior to the task, the students were in their school instead of a laboratory, and the control group listened to normal background noise instead of unnatural silence (Ivanov & Geake, 2003).

Bowman, Punyanunt-Carter, Cheah, Watson, and Rubin (2007) did a similar listening comprehension experiment. They had five experimental groups. Each group was given a different treatment prior to watching a video-taped lecture and completing a listening comprehension test. Group A listened to slow Mozart music, group B listened to fast Mozart music, group C listened to rock and roll music, group D listened to silence, and group E completed a crossword puzzle prior to watching the lecture. The scores were as follows: group A scored the highest, followed by group E, group D, group B, and finally group C. The group who listened to the slow Mozart song scored the highest on the listening comprehension test

(Bowman, Punyanunt-Carter, Cheah, Watson, & Rubin, 2007). They concluded that these results came about because they too conducted their experiment in a simulated classroom setting that was very familiar to the participants.

Cognition and Private Musical Training

Studies regarding the Mozart Effect have the subjects only listening to classical music. There have been numerous studies done in which the subjects' private musical training and intelligence and cognition are examined. Schellenberg (2006) found a positive correlation between duration of musical lessons in childhood and IQ. This correlation lasted until early adulthood, and was found to be true across all qualities of intelligence rather than a specific subset. Schellenberg (2006) found this to be true because his study was the first to utilize an entire IQ test as opposed to a specialized IQ test.

In another study conducted by Schellenberg (2004), children six years of age were given either keyboard, voice, drama, or no lessons over a year's time. They were given IQ tests before their first and after their last lessons. The groups of children who had received keyboard or voice lessons saw the greatest improvement in IQ score. The groups of children who had received drama or no lessons did not see significant increases in IQ scores other than those that can be attributed to entering and attending grade school (Ceci & Williams, 1997).

Additionally, an incidental finding saw that the children who had received drama lessons showed a significant increase in social and verbal skills when compared to the other groups of students (Schellenberg, 2004). This could be because they were forced to speak and perform both in front of an audience and among themselves or small groups due to the nature of the course.

Physical Effects of Music

While researching the effects of music, I discovered several very interesting studies regarding the physical effects of music. Whether music has a real effect on our bodies or if it's merely our psyche is still being researched. Nonetheless, the following research is very important to understanding how humans respond to music.

For instance, in a study done at the University of Maryland Medical Center, researchers linked music to increased cardiovascular health (Levitt, 2008). They had ten non-smoking volunteers listen to personally-selected joyful music, personally-selected anxious music, relaxation-promoting audio and laughter-inducing video. The researchers measured the participants' blood vessel diameter before and after each phase, and found that after listening to joyful music, the participants' blood vessel diameter had increased an impressive 26 percent. What's more, after listening to the anxious music, the participants' blood vessel diameter had decreased by six percent. According to Dr. Michael Miller, who led the study, the joyful music created an inherently positive physiological response, triggering the positive blood vessel dilation, whereas the anxious music created a negative physiological response and thus a negative dilation (Levitt, 2008).

Also, music was given to surgery patients in a Cleveland clinic who had to remain awake to ease the tension and stress of the operating room. In the same clinic, a study showed that listening to music has the ability slow the neuronal firings deep within the brain during surgery designed to treat patients with Parkinson's disease. This study came about when a neuroscientist named Damir Janigro was being prepped for spinal surgery. Amidst the strenuous buzz of the operating room, he longed for his earphones and iPod to drown out the noise. Janigro

hypothesized that because music and movement are often correlated, music would not only put the patients at ease but also change the activity of thalamic and subthalamic neurons, which are located in the same area where a neuronal pacemaker is implanted during deep-brain stimulation. (This procedure is used primarily with patients who suffer from epilepsy, brain tumors, Parkinson's, or other motor disorders.)

In Janigro's clinical study, approximately a dozen neurosurgical patients listened to three different pieces of music. One had no real melody and was primarily rhythmic, another was more melodic but had an undefined rhythm, and the third selection was a piece by Beethoven. The patients were asked how they felt when listening to each selection, and their brains' activity was also monitored. Almost all the patients said that the melodic music was the most soothing. The patients' brain activity supported that claim, too. The activity of individual neurons deep inside the brain decreased while the patients were listening to melodic music and the physical responses to the calming music ranged from patients closing their eyes to actually falling into a light sleep or even a round of snoring. When the surgeon needed patients to perform a given action such as lifting an arm, he simply removed their earphones and relayed instructions. Once the music resumed, patients returned to their sleeping or resting state.

(Carr, 2009).

Studying and Music

With any research, there are going to be proponents and opponents of any given topic. Music while studying is no different. There are many scientists who claim that listening to music will only distract you while you study, and there are some who claim that music is a valuable study tool. Respected scientists and leaders in their fields have concluded different

arguments. That doesn't necessarily make one side right or wrong; there has not been enough conclusive data published to refute one side over the other. There is no lack of data published, however.

For instance, in a study done at the Stanford University School of Medicine in Stanford, California, researchers found music to increase the brain's ability to pay attention therefore resulting in more efficient studying. In this study, they were tracking how the brain organizes events, and suggested that a process called segmentation in which meaningful chunks of information are remembered by the brain extracting information about beginnings, endings and the boundaries between helps humans make sense of the continuous information the world sends our way. Participants in this study, none of whom had had formal music training, listened to multi-movement pieces of classical music while researchers monitored their brain activity and function. The researchers focused on the transitions between movements, and found that brain activity in the areas of the brain that allow us to pay attention increased during these short silent moments in anticipation of the next movement. Anticipation is key to the music-listening experience. Even those whose ears are not musically trained are engaged at some level in gauging the development of a piece of music and forming predictions about what will come next. This anticipation and prediction of the next musical occurrence sharpens brain function and our ability to focus, inevitably inducing more efficient studying (Baker, 2007).

While the previous study found music to be a large help to the sharpening of brain function and ability to sustain attention, a study done at the University of Wales in Cardiff, United Kingdom, found otherwise. Researchers asked 25 participants between the ages of 18 and 30 to memorize, and later recall, a list of letters in a particular order. They were tested while listening to silence, music they liked, music they didn't like, a voice repeating the number three,

and a voice saying random single-digit numbers. Participants actually performed the worst while listening to music (whether they liked that music or not) and to the speech of random numbers. They performed the best in the silence and while listening to the voice repeating the number three.

The researchers speculated that the music may have impaired memorization abilities in these particular scenarios because of the constantly changing words and notes. The authors also explained the Mozart Effect as a mere increase in arousal and mood that inevitably improves performance. The difference between this study and the Mozart Effect study by Rauscher, Shaw and Ky in 1993 is that in this study, participants listened to the music during the assigned task as opposed to before completing the assigned task. They contend (and I agree) that this is a more realistic scenario.

While this study does not necessarily contradict any previous findings, it does suggest some limitations on the benefits of music in memorizing lists of things in order, which is often what studying entails. It also suggests that it might be more beneficial to study for an exam in quiet or listen to music before studying (Landau, 2010).

As I viewed the literature relating to the effects of music on humans, I realized there was a plethora of studies in which experiments were done to test the effects of music. However, I wondered how the participants perceived music as an effect on themselves, particularly their study habits. In my research, I focused on the perceived effects of music, formulating my own survey to gauge this.

Research Questions

Upon reviewing the literature available regarding the general discussion of music as a study aid, I wondered where MSSU students stood on this topic. I wanted to see if they had an opinion about the possible effects of music on their study habits, and I formulated the following questions upon which I based my research:

RQ 1: Is there a correlation between listening to music while studying and test scores/GPA?

RQ 2: Do MSSU students believe music has an effect – positive or negative – on their studying efficiency?

Methods

To answer my research questions, I administered a survey to 100 MSSU students. I wanted as wide a variation in demographics as possible. I went to UE classes, a Music Appreciation class, two communication classes, and I put surveys in the honors students' mailboxes. The survey was one page long, and was comprised of the following components.

Survey

The survey (Appendix A) addressed demographics first, asking the following: age, sex, class, ethnicity, majors and minors. Then, I asked their cumulative GPA. Next, I asked the questions relevant to my study. I asked how many minutes the participant listened to music in one day, and to what genre. Then, I asked if the participant always, sometimes or never listened to music while studying, and again to what genre they listened while studying. I asked the letter

grades of the last three tests they took. Last, I asked the participants if they thought music helped them study, hindered their studies, or if they were indifferent.

With these questions, I was able to gather some interesting information by running the data through the Statistical Package for the Social Sciences.

Results

Because of the nature of this survey, I was able to make ample conclusions based upon the frequencies test. These were the tests upon which I spent the most time dwelling, because I figured they would give me the most information. Upon running the frequencies of each aspect of my 100 surveys, I obtained the following information.

Of the 100 participants, 59 were female and 41 were male. As far as class is concerned, 28 were freshmen, 20 were sophomores, 21 were juniors, 30 were seniors, and one was listed as a graduate student. The next demographic was age: 12 participants were 18 years old; 16 participants were 19 years old; 16 were 20 years old; 17 were 21 and 22 years old, respectively; four were 23 years old; one was 24 years old and 17 participants were 25 or older, officially classifying them as non-traditional students. The ethnicity was not as evenly dispersed. Eighty-six percent of the participants were white, six percent were African American, three percent were Hispanic and other ethnicities, and two percent were Asian/Pacific Islander.

Twenty-seven majors were represented in the sample: Public Relations (12), Music (3), Mass Communication (10), Theatre (3), Elementary Education (5), Psychology (5), Biology/Chemistry (14), Mathematics (1), Speech Communication (1), Marketing (1), Secondary Education (2), Nursing (9), Sociology (1), English (4), Accounting (1), Computer Information Science (2), Management (4), Criminal Justice (5), Health Promotion and Wellness (3), Finance

(1), General Studies (2), General Business (1), French (1), Spanish (2), Political Science (1), and undecided (6). Thirty percent of the participants had one or more minors and 70 percent did not have a minor. As far as grade point averages are concerned, 55 participants had a GPA somewhere in the range of 3.5 to 4.0. Twenty-six were in the range of 3.0 to 3.49. Nine were in the range of 2.5-2.99, and ten were in the range of 2.0 to 2.49. All 100 participants had at least a C average, with seven at a C average. Thirty-nine had a B average and 54 had an A average.

The questions regarding music yielded interesting results upon which I will expound in the discussion section. When asked how often they listen to music in one day, nine participants listed to music for 30 minutes or less, 29 listened to music for 30 to 60 minutes per day, 19 listened for 60 to 90 minutes, 16 listened for 90 to 120 minutes, and 27 listened to more than 120 minutes of music in one day. The most frequent genre listened to was alternative/classic rock, with 26 participants, followed closely by pop/top 40, with 24 participants. The third most-listened-to genre was country, with 12 participants. Religious music followed with 10 participants. Eight participants ranked hip hop/R & B as their most frequently listened to genre while four participants each answered classical, jazz or techno. Broadway show tunes and metal/punk followed with three each, and indie had one listener. Only one participant of 100 said they never listen to music on a regular basis.

The next questions asked whether or not they listened to music while studying, and if so what genre. Thirty participants claimed they always listen to music and 22 claimed they always listen to music while studying. Nearly half – 48 percent – said they sometimes listen to music while studying. The frequencies of genres listened to while studying changed from genres listened to on a typical day. While 22 percent of participants listened to no music while studying, the other 78 percent who said they always or sometimes listened to music while studying

dispersed their numbers over several genres. Sixteen percent said they listened to alternative/classic rock while studying, followed closely by the 14 percent who said they listen to classical music. Eleven percent listened to pop/top 40, and eight percent each listened to jazz music and country music. Seven percent listened to hip hop/R & B, six percent listened to religious music. Three, two and one percents of the participants listened to techno, show tunes, and metal/punk, indie and blues music, respectively.

Lastly, the participants were asked if they believed music had an effect on their study habits. They were given the option to answer, “Yes, it helps me focus and study better,” “No, it distracts me and hinders my studying,” or “I am indifferent.” Of the 100 participants, 37 said listening to music helped them focus and study better and 25 said that it hinders their studying. Thirty-eight were indifferent.

Discussion

Several interesting conclusions regarding the demographics, music listening and study habits of MSSU students can be drawn from the numbers I obtained in my research.

Demographics

The sex, class, and age of the participants were the most evenly represented among demographics. However, ethnicity was a different story, with 86 percent of participants being white, six percent African American, three percent Hispanic, two percent Asian/Pacific Islander and three percent other. However, according to www.edumoho.com, this percentage is rather accurate proportionally to the ethnic makeup of the entire MSSU student body. Their information said that 85.4 percent of MSSU students were white, three percent were black, two percent were Hispanic and 1.3 percent were Asian (2008). This along with similar numbers for

sex (see Appendix C) supports the hypothesis that my sample of 100 participants was an accurate representation of Missouri Southern's student body (see Appendix B).

As for educational demographics such as majors, minors and grade point averages, there are a few points worthy of discussion. I had large number of different majors – 27 to be exact – but small percentages per major. Therefore it was not conducive to the study's end result to make any sort of definite conclusion based upon major. As for minors, instead of breaking each participant down by specific minor, I simply noted whether or not they had a minor. My reasoning was that students who have minors are most likely taking more hours than students who do not have minors, therefore they most likely are studying more. However, only 30 percent of my sample had minors, while 70 percent did not have a minor. Therefore, I disregarded this piece of information. Lastly, I took into account grade point average. More than half of my sample had above a 3.5; this was due to the fact that I used some honors students as participants. However, other GPA echelons were represented as well, and in large enough number to render them useful.

Music Listening

As a result of this survey, I can conclude that more than 75 percent of MSSU students sometimes or always listen to music while they study. They do so fairly successfully as well, because more than 75 percent of the MSSU students I surveyed also have above a 3.0 GPA, or a B average. Nearly every participant had a C average or above on their last three tests, whether they listened to music or not.

Also, more than 90 percent of students listened to at least 30 minutes of music a day, with an astounding 27 percent of students listening to more than two hours of music per day. This is a testament to the ubiquitous presence of music in human life, especially college students.

The heavy concentration of people who listen to pop/top 40, alternative/classic rock and country music most frequently during an average day suggests that most of these people are casual radio-listeners. I make this assumption based upon the high number of radio stations for these genres in the geographic area (Radio Stations in Joplin MO).

It is important to mention that when comparing numbers from frequently-listened-to genres and frequently-listened-to-while-studying genres, all genres decreased in numbers from the former to the latter except for classical music, which increased by an impressive ten percent. I believe this is the direct effect of the Mozart Effect's high media presence when it was first released in the 1990s. The idea that listening to classical music could make you smarter became instilled in the public's head, whether it actually did or not. There seems to be some mystical notion surrounding the musical masterpieces of the classical genre. Perhaps it is because they have stood the test of time that people hold them in a higher regard than the music of today. Whatever it may be, students tend to perceive classical music as having a positive effect on their study habits, as evident by the ten percent increase in listeners during study time. Thirty-seven percent of students said that listening to music of any kind while studying does indeed help them focus better and therefore study more efficiently.

As far as the perceived effects of listening to any other genre while studying, I do not have enough information to answer that question. While 30 percent of participants said they always listen to music while studying and 37 percent say they study better while listening to

music, it is still difficult to tell the effects of other genres without doing an experiment. And, further complicating the conclusion process, 38 percent of participants said they were indifferent toward the idea of music's effects on study habits, while 27 percent said listening to music while studying has a negative effect on them.

Based upon this research, my personal conclusion is that this issue is much more individualized than scientists have made it. I believe that students who are seeking more efficient ways to study must do a lot of trial-and-error to discover what truly works best for them; no sweeping generalization can be made about any specific genre having a positive or negative effect on every college student's study habits. For me, silence is often my best bet when studying. Some people may only be able to listen to music when studying math but need silence when they have to read for retention. Some people may be able to tune out any background noise to focus on the task at hand. However, many students will neither have the motivation nor the tools nor knowledge to personalize their own study habits. If research regarding music, background noise, silence and studying continues, then more students inevitably have a better chance at successful studying. With more research comes more information, and with more information comes a greater chance for success.

Further Studies

This particular study shifted focus from my original plan, and in my opinion it turned out decently. Originally, I was going to focus only on a correlation between test scores and GPA. However, as I was coding my surveys, I realized that there were a lot of different perceptions of music as well as several very different genres to which MSSU students listened. Because of this, I think it would be beneficial to further study students' perceptions of the effects of music on

study habits. We could use this information to teach incoming freshmen how to study better and approach the idea of efficient study habits more aggressively.

If I were to do this study again and perhaps have more than a semester to conduct the research, I would use a more individual approach for each participant. I would have them keep a “study log” and journal what they did to study for three tests. Then I would have them try listening to different genres of music to see which one, if any, works best for them. Prior to this experiment, I would have them fill out a more detailed survey regarding their own feelings toward listening to music while studying, asking such questions as “What genre of music do you feel has the greatest positive or negative effect on studying?” and “What is the primary reason you listen to music?” Also, I think it would be beneficial to observe the students while they are studying to see their body language and how they are reacting to each different genre of music. This would appropriately combine qualitative and quantitative research, and would undoubtedly be more in-depth and informative.

Reflection

The senior thesis experience has been invaluable to my educational career. Of course this extensive research project taught me interesting and useful information about music and its effects on humans. However, I learned the importance of organization, time management and communication with professors, and these are skills that are transferable to my future workplace, to my future household, and to all aspects of my life. Yes, I will think twice about turning on the radio while doing something important because of this project. But more importantly I will think twice before being tempted to procrastinate until tomorrow what could get done today, before leaving my desk and my computer desktop a mess, and before hesitating to ask my professor or

boss a question. This experience has ultimately and adequately prepared me for the next step in my life – whether academic or not – and for that I am grateful.

Appendix A

My name is Melissa Holt, and I'm a senior Mass Communication and Public Relations major and Honors Program student. I am conducting a semester-long research project in partial fulfillment of COMM 490 and Honors Program requirements. As a part of this project I'm researching the possible relationship between listening to music while studying and test results. All answers will remain anonymous and confidential. Please answer ALL questions honestly and to the best of your ability.

If you have any questions, please contact Professor Kristen Livingston in Webster Hall 134, (417) 625-9791 or Livingston-k@mssu.edu. Thank you!

Please circle one or fill in the blank:

Sex: Female Male **Age:** 18 19 20 21 22 23 24 25+

Ethnicity:	White	Class: Freshman	
	Hispanic		Sophomore
	African American		Junior
	Asian/Pacific Islander		Senior
	Other: _____		Graduate Student

Major(s): _____ **Minor(s):** _____ **Cumulative GPA:** _____

Please choose the answer that best fits you:

How often do you listen to music in one (1) day?

0-30 minutes	90-120 minutes
30-60 minutes	120+ minutes
60-90 minutes	

To what genre do you most frequently listen?

Pop/Top 40	Jazz
Hip-hop/R&B	Religious
Alternative/Classic Rock	Other: _____
Classical	

How often do you listen to music while studying?

Always
Sometimes
Never

To what genre do you listen while studying?

Pop/Top 40	Jazz
Hip-hop/R&B	Religious
Alternative/Classic Rock	Other: _____
Classical	

What were the letter grades (A, B, C, D or F) of your last three (3) tests? _____, _____ & _____.

Do you feel that listening to music affects the effectiveness of your studying?

Yes, it helps me focus and study better.

No, it distracts me and hinders my studying.

I am indifferent.

Appendix A, continued

Survey Code Sheet for SPSS

Variable Values

Value		Label	
Sex	1	Female	
	2	Male	
Class	1	Freshman	
	2	Sophomore	
	3	Junior	
	4	Senior	
	5	Graduate Student	
Age	1		18
	2		19
	3		20
	4		21
	5		22
	6		23
	7		24
	8		25+
Ethnicity	1	White	
	2	Hispanic	
	3	African American	
	4	Asian/Pacific Islander	
	5	Other	

Major	1	PR
	2	Music
	3	Mass Communication
	4	Theatre
	5	Elementary Ed
	6	Psychology
	7	Biology/Chemistry
	8	Mathematics
	9	Speech Comm
	10	Marketing
	11	Secondary Ed
	12	Nursing
	13	Sociology
	14	English
	15	Accounting
	16	CIS
	17	Management
	18	Undecided
	19	CJ
	20	Health Promotion & Wellness
	22	Finance
	23	General Studies
	24	Business
	25	French

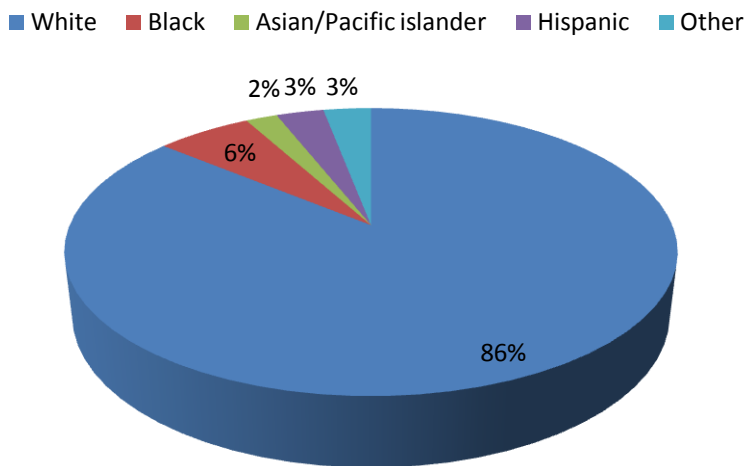
	26	Spanish
	27	Political Science
Minor	1	Yes
	2	No
GPA	1	3.5-4.0
	2	3.0-3.49
	3	2.5-2.99
	4	2.0-2.49
	5	1.5-1.9
	6	Below 1.5
Music Per Day	1	0-30 mins per day
	2	30-60 mins per day
	3	60-90 mins per day
	4	90-120 mins per day
	5	120+ mins per day
Frequent Genre	1	Pop/Top 40
	2	Hip Hop/R&B
	3	Alternative/Classic Rock
	4	Classical
	5	Jazz
	6	Religious
	7	Show Tunes
	8	Metal/Punk
	9	Latin

	10	None
	11	Country
	12	Techno
	13	Indie
	14	Blues
Music While Studying	1	Always
	2	Sometimes
	3	Never
Genre While Studying	1	Pop/Top 40
	2	Hip Hop/R&B
	3	Alternative/Classic Rock
	4	Classical
	5	Jazz
	6	Religious
	7	Show Tunes
	8	Metal/Punk
	9	Latin
	10	None
	11	Country
	12	Techno
	13	Indie
	14	Blues
Perceived Music Effect	1	Yes, it helps me focus better.
	2	No, it hinders my studying.

Test Scores	3	I am indifferent.
	1	A avg
	2	B avg
	3	C avg
	4	D avg
	5	F avg

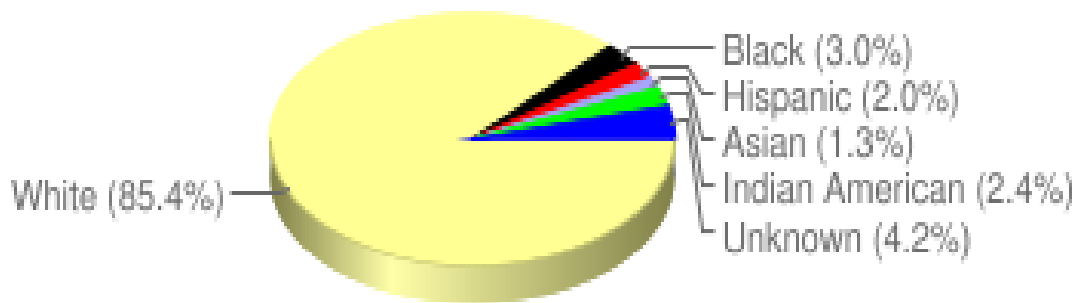
Appendix B

Ethnicity of Survey Sample



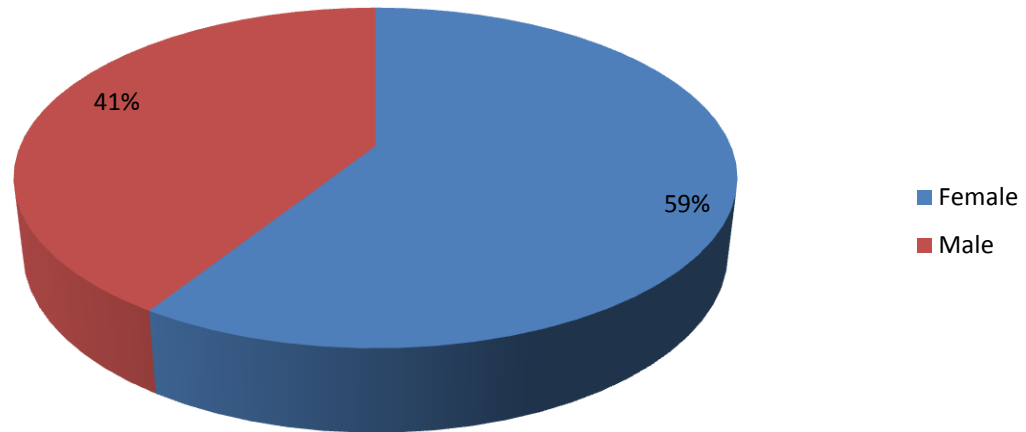
MSSU Ethnicity

(http://www.edumoj.com/college/collegedetails/school/Missouri+Southern+State+University__3950+E+Newman+Rd,+Joplin,+Missouri+64801-1595__MO__178341)



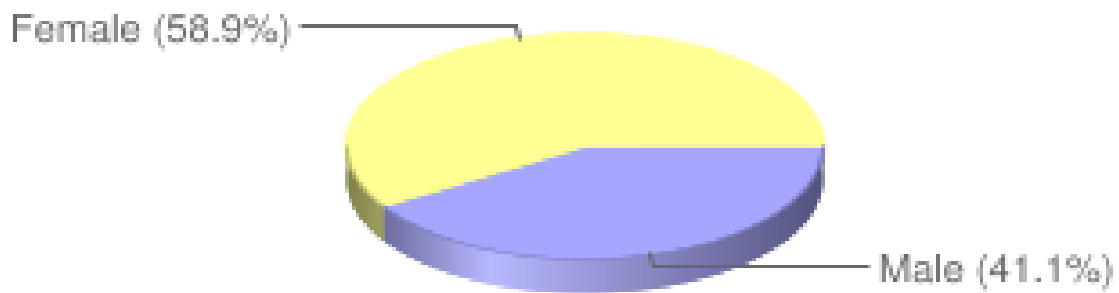
Appendix C

Sex of Survey Sample



MSSU Sex

(http://www.edumoho.com/college/collegedetails/school/Missouri+Southern+State+University__3950+E+Newman+Rd,+Joplin,+Missouri+64801-1595__MO__178341)



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